

## **PHYSICAL ENVIRONMENT**

### **2.7 Water Quality and Stormwater Runoff**

#### **2.7.1 Regulatory Setting**

##### **2.7.1.1 Federal Requirements: Clean Water Act**

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source<sup>1</sup> unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

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<sup>1</sup> A point source is any discrete conveyance such as a pipe or a human-made ditch.

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b) (1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent<sup>1</sup> standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b) (1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

#### **2.7.1.2 State Requirements: Porter-Cologne Water Quality Control Act**

California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act), enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface

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<sup>1</sup> The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

### **2.7.1.3 State Water Resources Control Board and Regional Water Quality Control Boards**

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

#### ***National Pollutant Discharge Elimination System (NPDES) Program Municipal Separate Storm Sewer Systems (MS4)***

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances

(roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the California Department of Transportation (Caltrans) as an owner/operator of an MS4 under federal regulations. The Caltrans’ MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Caltrans’ MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014), and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. Caltrans’ storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The Build Alternative will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

### *Construction General Permit*

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012) regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with Caltrans' SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA of less than one acre.

### *Section 401 Permitting*

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

## **2.7.2 Affected Environment**

This section is based on the *Water Quality Assessment Report* (2017) prepared for the project.

### **2.7.2.1 Surface Water**

#### ***Regional and Local Hydrology***

The project area is located in the Mission Viejo Hydrologic Area (HA) of the San Juan Hydrologic Unit (HU) of the San Diego RWQCB. The two major natural surface water bodies within the San Juan HU are San Juan Creek and San Mateo Creek. Runoff from the project area discharges to San Juan Creek, which runs parallel to State Route 74 (SR-74). Downstream of the project area, San Juan Creek is joined by numerous small tributaries below where it joins with Trabuco Creek and ultimately discharges to the Pacific Ocean at Doheny Beach.

San Juan Creek has a drainage area of approximately 176 square miles. San Juan Creek originates in the Santa Ana Mountains in the Cleveland National Forest and flows approximately 27 miles to the Pacific Ocean. The upper reach of San Juan Creek, where the project area is located, contains exceptionally rugged terrain with steep slopes and generally sparse vegetative cover. The middle reach of San Juan Creek is characterized by considerably more dense vegetation, rolling foothills, agricultural land, and some developments. The lower reach of San Juan Creek flows through a floodplain, which is characterized by increased development and decreased vegetation cover. The lowest portion of San Juan Creek, which contains the confluence with Trabuco Creek, is channelized with sloped concrete banks with minimal vegetation. The floodplain is highly developed; encompassing residential, commercial, and industrial uses and degraded open space.

#### ***Surface Water Quality Objectives and Standards***

Surface flows within San Juan Creek consist primarily of perennial creek flows and ephemeral flows from the smaller tributaries within the watershed. The flows

originate from stormwater runoff during the wet season and from springs and groundwater seepage during the dry season.

The following numeric water quality objectives were listed in the San Diego RWQCB Basin Plan for the Mission Viejo HA of the San Juan HU:

- **Un-ionized Ammonia:** 0.025 milligrams per liter (mg/L)
- **Total Dissolved Solids:** 500 mg/L
- **Chloride:** 250 mg/L
- **Sulfate:** 250 mg/L
- **Percent Sodium (Na):** 60 percent
- **Phosphorus:** 0.1 mg/L
- **Iron:** 0.3 mg/L
- **Manganese:** 0.05 mg/L
- **Methylene Blue Active Substances (MBAS):** 0.5 mg/L
- **Boron:** 0.75 mg/L
- **Turbidity:** 20 Nephelometric Turbidity Units (NTUs)
- **Fluoride:** 1 mg/L

The San Diego RWQCB Basin Plan designated the following beneficial uses for San Juan Creek in the vicinity of the project area:

- **Municipal and Domestic Supply (MUN):** Waters that are used for community, military, municipal, or individual water supply systems. These uses may include, but are not limited to, drinking water supply.
- **Agriculture Supply (AGR):** Waters that are used for farming, horticulture, or ranching. These uses include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- **Industrial Service Supply (IND):** Water uses for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
- **Water Contact Recreation (REC-1):** Waters that are used for recreation activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.

- **Non-Contact Water Recreation (REC-2):** Waters that are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
- **Warm Freshwater Habitat (WARM):** Waters uses that support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- **Cold Freshwater Habitat (COLD):** Waters uses that support cold water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- **Wildlife Habitat (WILD):** Water uses that support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

The SWRCB approved the *2012 Integrated Report* (Clean Water Act Section 303[d] List/305 [b]) on April 8, 2015. On July 30, 2015, the EPA approved the 2012 California 303(d) List of Water Quality Limited Segments. The segment of San Juan Creek in the project area is not designated as impaired under the Section 303(d) of the Clean Water Act (CWA); however, a one-mile stretch of San Juan Creek approximately 13 miles downstream has been designated as impaired for unknown sources of DDE (dichlorodiphenyldichloroethylene), indicator bacteria, phosphorous, selenium, total nitrogen as N, and toxicity.

San Juan Creek ultimately discharges to the Pacific Ocean, which falls under a TMDL for indicator bacteria (Project I – Twenty Beaches and Creeks in the San Diego Region [Including Tecolote Creek]). The San Diego RWQCB adopted resolution No. R9-2010-0001, which incorporated the TMDL into the San Diego RWQCB Basin Plan and identified in Attachment IV of the Caltrans Statewide NPDES Permit (Order No. 2012-0011-DWQ as amended in Order WQ 2014-0077-DWQ). Runoff from the project area discharges to a water body with an established TMDL; therefore, as identified in Attachment IV of the Caltrans NPDES permit, any runoff treated in excess of the new impervious area created by the project may be claimed as a Compliance Unit (CU) to meet Caltrans NPDES permit requirements for achieving the TMDL compliance strategy.



San Juan Creek is influenced by non-point sources of storm water from urban and residential developments. Contaminants and pollutants affecting the watershed include vehicle-related pollutants from roadways such as oil, grease, heavy metals, and other petroleum products from roadways. Pollutants from illicit dumping, pesticides, herbicides, and fertilizers from parks, residential homes, and golf courses, and agriculture runoff contribute to the poor surface water quality in San Juan Creek.

### **2.7.2.2 Groundwater**

#### ***Groundwater Hydrology***

The project area is located in the San Juan Groundwater Basin, which is split by the Cristianitos Fault into two basins that are referred to as the Upper San Juan Basin and the Lower San Juan Basin. The project is located in the Upper San Juan Basin. The San Juan Groundwater Basin has approximately 63,220 acre-feet of storage capacity, 21,620 acre-feet in the Upper San Juan Basin and 41,600 acre-feet in the Lower San Juan Basin. In 2004 and 2005, depth to groundwater was typically less than 20 feet in the lower and middle portions of the San Juan Groundwater Basin.

Primary inflows for the San Juan Groundwater Basin are subsurface flows, and primary outflows are from well extractions. Recharge consists of subsurface inflow from the tributary alluvial riverbed areas, streambed percolation from the San Juan and Trabuco Creeks, rainfall infiltration and percolation, and percolation from landscape and agricultural irrigation. Total inflow to the San Juan Groundwater Basin is estimated at 4,284 acre-feet per year. Total outflow from the San Juan Groundwater Basin consists of well extractions, extraction from deep rooted plants, and subterranean outflow at the mouth of San Juan Creek. Outflow from the San Juan Groundwater Basin is estimated to be 4,819 acre-feet per year. A study conducted for the San Juan Basin Authority in 1994 revealed that the San Juan Groundwater Basin may have been overdrafted by an average of 2,000 acre-feet per year during the period studied (1979 to 1990). Currently, two water districts, Capistrano Valley Water District and Trabuco Canyon Water District, are actively pumping groundwater from the San Juan Groundwater Basin. The Capistrano Valley Water District and Trabuco Canyon Water District receive approximately 30 percent and 15 percent of their total water supply from groundwater, respectively.

#### ***Groundwater Quality Objectives and Standards***

Groundwater in the San Juan Groundwater Basin contains high levels of dissolved solids and salt from the high salt content in water-bearing sediments.

The numeric groundwater quality objectives for the Upper San Juan Groundwater Basin are:

- **Total Dissolved Solids:** 500 mg/L
- **Chloride:** 250 mg/L
- **Sulfates:** 250 mg/L
- **Percent Sodium:** 60 percent
- **Nitrate:** 45 mg/L
- **Iron:** 0.3 mg/L
- **Manganese:** 0.05 mg/L
- **Methylene Blue Active Substances (MBAS):** 0.5 mg/L
- **Boron:** 0.75 mg/L
- **Turbidity:** 5 NTUs
- **Fluoride:** 1 mg/L

The existing beneficial uses for groundwater in the San Juan HU as designated in the San Diego RWQCB Basin Plan are listed below:

- **Municipal and Domestic Supply (MUN):** Waters that are used for community, military, municipal, or individual water supply systems. These uses may include, but are not limited to, drinking water supply.
- **Agriculture Supply (AGR):** Waters that are used for farming, horticulture, or ranching. These uses include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- **Industrial Service Supply (IND):** Waters that are used for industrial activities that do not depend primarily on water quality. These uses may include, but are not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.

### 2.7.3 Environmental Consequences

#### 2.7.3.1 Temporary Impacts

##### ***Build Alternative (Preferred Alternative)***

Pollutants of concern during construction for the Build Alternative include sediments from grading, excavation, and construction activities; trash from workers and construction waste; petroleum products from construction equipment and/or vehicles; concrete waste; sanitary wastes from portable toilets; and other chemicals used for construction, such as coolants used for equipment and/or concrete-curing compounds. In addition, construction activities disturb soil and increase the potential for erosion.

The total DSA during construction of the Build Alternative would be approximately 6.55 acres. Temporary construction-related impacts would be addressed by the implementation of Project Features PF-WQ-2 and PF-WQ-3, which are described below and which would ensure project construction complies with necessary permits.

**PF-WQ-2** The project will comply with the provisions of the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)* Order No. 2009-0009- DWQ, NPDES No. CAS000002 and the and any subsequent permits in effect at the time of construction.

**PF-WQ-3** The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-storm water BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the *Storm Water Quality Handbooks: Construction Site Best Management Practices Manual* (May 2017) to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-storm water BMPs.

Therefore, with implementation of Project Features PF-WQ-2 and PF-WQ-3, no adverse effects to water quality from construction activities are anticipated during construction of the Build Alternative.

It is not anticipated that groundwater would be encountered during construction. However, because groundwater levels have historically been measured at less than 20 feet, the potential for groundwater to be encountered during construction and for groundwater dewatering to be required cannot be ruled out. Groundwater contains high levels of dissolved solids and salts and could affect water quality when

discharged to surface waters. The potential for groundwater dewatering during construction would be addressed by Project Feature PF-WQ-6.

**PF-WQ-6** If dewatering is required, construction site dewatering must comply with the General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region (Order No. R9-2015-0013, NPDES No. CAG919003) and any subsequent updates to the permit at the time of construction. This Permit addresses temporary dewatering operations during construction. Dewatering BMPs must be used to control sediment and pollutants, and the discharges must comply with the WDRs issued by the San Diego RWQCB.

Therefore, Project Feature PF-WQ-6 would ensure that no adverse effects to water quality from groundwater dewatering are anticipated during construction of the Build Alternative.

### ***No Build Alternative***

Under the No Build Alternative, no improvements other than routine roadway maintenance would be made. The No Build Alternative would result in no short-term water quality impacts from construction-related activities.

### **2.7.3.2 Permanent Impacts**

#### ***Build Alternative (Preferred Alternative)***

Pollutants of concern generated during the operation of a transportation facility include sediment/turbidity, nutrients, trash and debris, bacteria and viruses, oxygen-demanding substances, organic compounds, oil and grease, pesticides, and metals. The existing impervious surface within the project limits is 20.30 acres, and the Build Alternative would increase impervious surface area by 1.01 acres, resulting in a total post-construction impervious surface area of 21.31 acres. The Build Alternative does not include additional lanes; therefore, the increase in impervious surface area would result solely from the widening of paved shoulder. Because the project would not include any additional travel lanes, the project would not increase traffic or result in additional pollutant loading that is typically found during the operation of a transportation facility. An increase in impervious surface area can increase stormwater runoff volume and velocity and lead to downstream erosion. However, the proposed project is linear with many stormwater discharge points that would distribute the additional stormwater runoff to multiple locations; therefore,

downstream effects from increased flow would be minimal. Project Feature PF-WQ-1 as outlined below would reduce operational impacts.

**PF-WQ-1** The project will comply with the provisions of the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the State of California, Department of Transportation, Order No. 2012-0011-DWQ, NPDES No. CAS00003* and any subsequent permits in effect at the time of construction.

As described in Project Features PF-WQ-4 and PF-WQ-5, Caltrans would incorporate approved Design Pollution Prevention and Treatment BMPs and Low Impact Development (LID) strategies consistent with the Caltrans Statewide NPDES permit requirements to address pollutants in runoff that would be generated during operation of the Build Alternative.

**PF-WQ-4** Design Pollution Prevention Best Management Practices (BMPs) will be implemented, such as preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/velocity dissipation devices.

**PF-WQ-5** Caltrans-approved Treatment BMPs will be implemented consistent with the requirements of the NPDES Permit and Waste Discharge Requirements for the State of California, Department of Transportation, Order No. 2012-0011-DWQ, NPDES No. CAS00003 and any subsequent permits in effect at the time of construction. Treatment BMPs may include biofiltration strips, biofiltration swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters, and wet basins.

Therefore, with implementation of permanent BMPs, as project features and standardized measures outlined above, operation of the Build Alternative would not result in permanent adverse water quality impacts.

### **No Build Alternative**

Under the No Build Alternative, no improvements other than routine roadway maintenance would be made. The No Build Alternative would not increase the impervious surface area; however, existing runoff would remain untreated.

#### **2.7.4 Avoidance, Minimization, and/or Mitigation Measures**

Because the project will incorporate project features as outlined above, and no adverse impacts to water quality would occur, no avoidance, minimization, and/or mitigation measures are required.